United States Environmental Protection Agency
Region III
Corrective Action Program

Environmental Indicator Inspection Report
For

ANH Refractories Technology Center
(Former Harbison-Walker Refractories)
1001 Pittsburgh-McKeesport Blvd.
West Mifflin, Pennsylvania 15222

EPA ID No. PAD083960286

Prepared By

Baker

July 2009

TABLE OF CONTENTS

LIST OF APPENDICES

RCRA SITE INSPECTION REPORT

Purpose: To gather relevant information from the Harbison-Walker Refractories (Harbison-Walker) facility, in order to determine whether human exposures and groundwater releases are controlled, as per Environmental Indicator Determination forms.

Documentation Review: Prior to the site visit, Mr. JP Kumar, of Michael Baker Jr., Inc (Baker) conducted an extensive records review of the Pennsylvania Department of Environmental Protection (PADEP) South Western Regional Office and the U.S. Environmental Protection Agency (USEPA) Region III Philadelphia Office files. Prior to the site visit and following the site visit, Harbison-Walker provided Baker with additional information to be incorporated in the report. An unannounced hazardous waste facility inspection was also conducted by PADEP during the site visit.

Attendees:

Name	Organization	Phone Number	E-Mail address
Mr. Bruce Hamilton	ANH Refractories	412-375-6820	bhamilton@anhrefractories.com
Mr. Jim Vojtko	ANH Refractories	412-469-6145	jim.vojtko@anhrefractories.com
Mr. Leigh Brooks	ANH Refractories	412-469-6136	lbrooks@anhrefractories.com
Mr. Carl Spadaro	PADEP	412-442-4157	cspadaro@state.pa. us
Mr. John Kendall	PADEP	412-442-5802	jkendall@state.pa.us
Mr. JP Kumar	Baker	412-269-6060	jpkumar@mbakercorp.com

Meeting Summary: A meeting at the facility was held with the attendees noted above on April 23, 2009. Mr. Carl Spadaro and Mr. JP Kumar presented the facility with information regarding USEPA Region III's Corrective Action process, the Environmental Indicator Assessment Program and the legislation driving this program. Under this investigation, USEPA Region III is focusing on two interim Environmental Indicators to evaluate whether any unacceptable risk to human health and the environment is ongoing at each priority facility. The two indicators determine if human exposures and groundwater releases are controlled. Prior to and during the site visit, outstanding issues and discrepancies encountered in the file review summary were discussed.

The site visit continued with an overview of areas to be observed and a tour of the facility. Photographs of the site visit are presented in Appendix A – Photographs.

A. Location and Operational History of the Facility, Including all Wastes Generated at the Facility and their Management.

Site Layout and Background Information

The ANH Refractories Technology Center (formerly Harbison-Walker Refractories) is located in West Mifflin, Allegheny County, Pennsylvania. Harbison-Walker Refractories (Harbison Walker) constructed the facility in 1958. In 2000, Harbison-Walker became a conglomerate of ANH Refractories (ANH) that includes A.P. Green and the North American Refractories Company (NARCO). Subsequently, ANH renamed the Harbison-Walker facility to the ANH Refractories Technology Center (Center). The Center continues to operate under the same EPA ID number. Appendix B - Figure 1 Facility Location Map shows the general location and surroundings of the facility.

The Center is situated on 19.5 acres of land on top of a hill, with a metal fence surrounding all but 7 acres of the property. A driveway leads to the building from Pittsburgh-McKeesport Boulevard. The Center is located in the same building that houses the NARCO facility. The NARCO facility occupies the central and the newer western portions of the building, which consists of a large pilot plant area, machine shops, kilns, and a production area. The NARCO facility operates under a separate EPA ID number and therefore, it is not the subject of this EI document.

The Center started operation in 1959 as a research laboratory that conducted chemical and physical tests on refractory clays and other ceramic materials. Presently, the Center specializes on "post-mortem" testing of refractory materials, testing of furnace lining, and testing of competitors' products. The Center also conducts limited research activities. The chemical and physical laboratories operated by the Center are located in the eastern portion of the building. The laboratories utilize X-ray fluorescence spectrometry (XRF), inductively coupled plasma (ICP)-based metals analysis, X-ray diffraction (XRD), and scanning electron microscopy (SEM) for analyzing the constituents of materials. A Creep Furnace Room and electric kilns located in the southern side of the building are utilized for conducting high-temperature tests of refractory materials. Following the testing protocol, refractory materials, which include raw materials and

tested products, are disposed of as wastes. Out-of date laboratory chemicals used for the tests are disposed of as lab packs by licensed facilities.

The 1990 Environmental Priorities Initiative Preliminary Assessment Report (PA) identified two solid waste management units (SWMUs) that included a hazardous waste storage area inside the facility's storage garage and a dumpster located outside the facility. The site visit in 2009 confirms that a hazardous waste storage shed is located adjacent to a newer addition at the western end of the building and two non-hazardous waste storage dumpsters are located under a shelter outside the north-central wall. ANH personnel indicated that they were evaluating recycling options for the waste materials to reduce waste disposal as hazardous waste or residual waste, under a Source Reduction program. Appendix B - Figure 2 Facility Layout Map identifies the features associated with the facility.

Permit and Regulatory Action History

As of the site visit in 2009, there have been no reported spills or releases. The facility is designated as a conditionally-exempt small quantity generator (CESQG) and therefore, a waste storage permit is not required. The Center does not operate under an air permit or a NPDES permit. Wastewater is discharged to the West Mifflin sewage treatment plant.

On August 18, 1980, the facility filed a Notification of Hazardous Waste Activity and submitted a Part A Hazardous Waste Permit Application. The notification contained hazardous waste codes F001, F002, F003, F004, and F005. The notification also included commercial chemical products, which the facility handled under waste codes P022, U134, U135, U151, U154, U159, U169, and U239.

A subsequent notification on November 19, 1980, lists the following estimated annual quantities of listed wastes under the process code S01 (storage capacity of 500 gallons):

- D001: 5,500 lbs
- D002: 1,000 lbs
- D007: 2,000 lbs
- D009: 150 lbs

On July 23, 1981, an interim status permit stated that the Facility was allowed to store up to 500 gallons and waste codes D001, D002, D007, and D009.

In a letter dated June 4, 1982, the facility reported to PADEP that the Center was a SQG, which did not require a permit. PADEP made a determination in a letter dated November 19, 1982, that following their inspection of the facility and review of files, that in no month did the facility generate more than 1,000 kg of waste nor did they accumulate and/or transport more than 1,000 kg of hazardous waste. Based on this evaluation, PADEP determined that the facility appeared to meet the requirements of a SQG and would therefore not need a waste storage permit.

On March 16, 1989, the facility sent a letter to USEPA (in response to their letter requesting information on SWMUs at the facility), stating that the facility was listed as a SQG. Further, the letter stated that the facility did not have RCRA interim status and was not required to apply for a permit.

The PA identified two types of generated wastes: laboratory wastes and pilot-plant wastes. The Interim Status lists the following waste codes: D001 (ignitable), D002 (corrosive), D007 (chromium), and D009 (mercury). The laboratory wastes contained chemicals such as mercury, calcium oxide, aluphos (a phosphating chemical for painting on aluminium surface), and phosphoric acid. Resin wastes were unused portions of resin that were generated at the pilot plant. Empty resin drums were disposed of along with paper and wood. The only process code reported was S01, corresponding to storage containers.

On February 11, 1994, the facility submitted a notification of two new waste codes D018 (Toxicity Characteristic Leaching Procedure [TCLP] characteristic for benzene) and D039 (TCLP characteristic for tetrachloroethylene). The facility reported that less than 100 kg/month of these wastes were produced.

The facility continues to produce small quantities of wastes from expired chemicals and raw materials used in the testing as well as the tested products, as reported during the site visit in 2009. The majority of the wastes are expired chemicals which remain in their original packaging stored in a metal shed located approximately 30 feet from the main building. The storage building is posted with signs warning "Hazardous Waste Storage" and it is locked at all times. There are no floor drains within this building. The facility uses several companies for transport and disposal of wastes.

The facility generated approximately 100 pounds of chromium-containing waste (D007) and several tons of non-hazardous waste based upon recent activity in 2009. Kerosene is used in tests for materials that require complete exclusion of water. The kerosene is recycled and no floor

drains are present in the test area.

The facility also generates universal wastes such as fluorescent light bulbs, and dry and wet (sealed) batteries that are stored in a designated area. Periodically, these wastes are collected by a recycling facility.

Based on the recent site visit and inspection report in 2009, the following is the updated list of hazardous wastes being generated at the facility:

- Waste aerosols, oxidizing and flammable liquids - D001
- Waste corrosives (hydroxides) - D002
- Waste mercury - D009
- Waste paint-related material - D001, D035, F003 and F005

The facility uses a parts-cleaner in the machine shop that uses a non-hazardous "150 Solvent", serviced by Safety Kleen.

National Pollution Discharge Elimination System (NPDES)

The facility does not operate under a NPDES permit. Wastewater is discharged directly to the West Mifflin sewage treatment plant. The wastewater meets West Mifflin Sewer Authority's discharge standards because heavy metals regulated under the TCLP (40 CFR 261.24) are not used in the operations that generate wastewater. The main source of wastewater is from the wet saw operation and a secondary source is from the cleaning of machines between test batches to prevent cross-contamination.

B. Description of all SWMUs and/or Areas of Concern (AOCs)

SWMUs

The PA identified two SWMUs (SWMU 1 - Hazardous Waste Storage Area and SWMU 2 - Dumpster). The following is a description of the two SWMUs based on the site visit in 2009 and the 1989 PA site visit.

SWMU 1 is a dedicated shed (15 feet by 20 feet) located on a concrete pad adjacent to the southwest corner of the extended portion of the main building used for hazardous waste storage. A few drums of waste oil were stored within secondary containment. No evidence of spills or releases was apparent. During the PA site visit, the hazardous waste storage area was a fenced

area (8 feet by 5 feet) at the rear of a storage garage. Approximately four 25-gallon drums and a number of 5-gallon containers were noted to be present. The drums rested directly on the concrete surface surrounded by a 6-inch steel dike at the time of the PA visit. No evidence of spills or releases was apparent during the PA site visit. According to the facility on May 29, 2009, the hazardous waste storage area was relocated to a shed located between the storage garage and the main building during 1995-1996. The hazardous waste storage shed was relocated to its current location sometime during the year 2000, when the storage garage was expanded to connect to the main building.

SWMU 2 consisted of two waste dumpsters placed under a shelter in the loading dock area. One dumpster was used for plant trash (municipal waste) disposal. The second (larger) dumpster was used for residual waste consisting of waste refractory. No evidence of spills or releases was apparent. During the PA site visit, the one dumpster was approximately 20-feet long by 8-feet wide and 5-feet deep, made of steel. Wastes disposed in the dumpster included paper products from offices and lunch rooms, wooden pallets, and empty 55-gallon drums which used to contain resin material.

Storage Tanks

One above-ground storage tank (AST) of 200-gallon capacity for diesel fuel was present during the site visit in 2009. No leaks were apparent. No storage tanks were reported to be present during the PA site visit.

Investigations and Remedial Actions to Date

No investigations and remedial actions were required to date.

Inspections

On November 5, 1982, a hazardous waste inspection was conducted by PADEP. The report concluded with the comment that the facility qualified as a SQG.

On October 26, 1989, a hazardous waste inspection was conducted by PADEP. The report noted that the facility remained a SQG. The report also noted two violations of hazardous waste shipment manifests, which resulted in the NOV dated October 31, 1989.

- One shipment of waste-parts washer solution was shipped to Safety-Kleen without a Hazardous Waste Manifest, in violation of 25 PA Code Section 75.262(e)(2)
- At least two drums of hazardous waste, manifested to GSX Services, Inc., on June 12,

1989 as D001 waste were misidentified as D001 instead of F005 on the manifest in violation of 25 PA Code Section 75.262(e)(7)(ix)

According to the most recent contact with ANH in August 2008, the facility had not been inspected since 1989.

PADEP conducted an unannounced inspection on April 23, 2009 at the time of the site visit that was conducted in support of the EI. No hazardous waste violations were noted at the time of the inspection. The inspection report noted that the facility is a CESQG, generating less than 200 pounds of hazardous waste per month. No hazardous wastes were in storage. Several supersacks of used petroleum coke (fuel) were stored under a lean-to attached to the rear of the building. The bags were in various stages of deteriorations and required repackaging. The material belonged to another vendor and was being stored at ANH until arrangements for pickup were finalized. On May 28, 2009, the facility reported that the petroleum coke and anodes were shipped back to the supplier.

C. Description of Exposure Pathways for all Releases or Potential Releases

Air: The facility does not require an air emissions permit. Releases via the air exposure pathway are not relevant. The facility is located in West Mifflin borough, a populated urban area (approximate population of 22,000 according to year 2000 census) east of Pittsburgh, PA.

Groundwater: The groundwater in the region is stored and transmitted along fractures, joints, and bedding-plane separations in the sandstone and limestone bedrock of the Monongahela formation (PA report, 1990). Artesian conditions can be found in the area; however yields are reported to be low because of artificial conditions created by extensive coal-mining activity. The area receives its water supply from Penn American Water, with intakes located on the Monongahela River. Groundwater is not used at the facility, although no restrictions on the use of groundwater in the surrounding areas are known to exist.

Surface Water: The facility is located on a hill with natural drainage towards the surroundings. Surface water would flow approximately 1,500 feet east to southeast and enter small unnamed tributaries, which would ultimately discharge at the Monongahela River, located approximately 1.5 miles (straight-line distance) southeast of the facility. A palustrine wetland is located less than a mile southeast of the facility. The facility does not operate under an NPDES permit. No surface water features were apparent at the facility during the site visits in 1989 and 2009.

Soil: The soil in area is described as being Urban Land- Guernsey Complex (NUS, 1990). The material overlies the Pennsylvanian age Monongahela Formation.

D. Exposure Pathway Controls and/or Release Controls Instituted at the Facility

No releases of contaminants to the environmental media have occurred. Therefore, exposure pathway and/or release controls are not required.

E. Follow-up Action Items

USEPA Region III will decide if additional information or sampling at the facility is required to determine whether or not the environmental indicators have been met or if corrective action is required for the facility.

Baker

Michael Baker Jr., Inc.

APPENDIX A

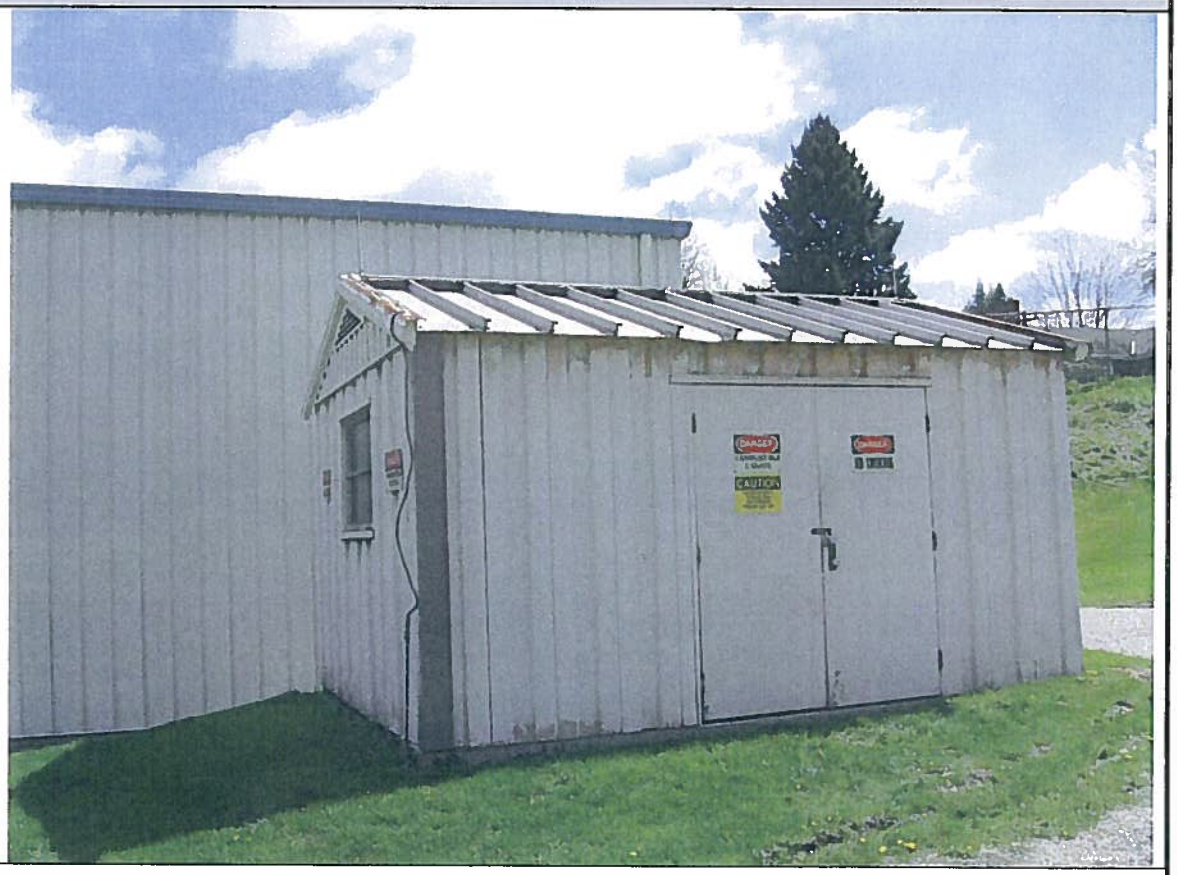
Photographs

MICHAEL BAKER JR., INC. – PHOTOGRAPHIC RECORD

SITE NAME: **Harbison-Walker Refractories**

PHOTOGRAPH **1**	
VIEW **North**	
PHOTOGRAPHS BY **Baker**	

Comments: Building housing ANH Family of Companies (Harbison-Walker Refractories, North American Refractories, and AP Green)

PHOTOGRAPH **2**	
VIEW **West**	
PHOTOGRAPHS BY **Baker**	

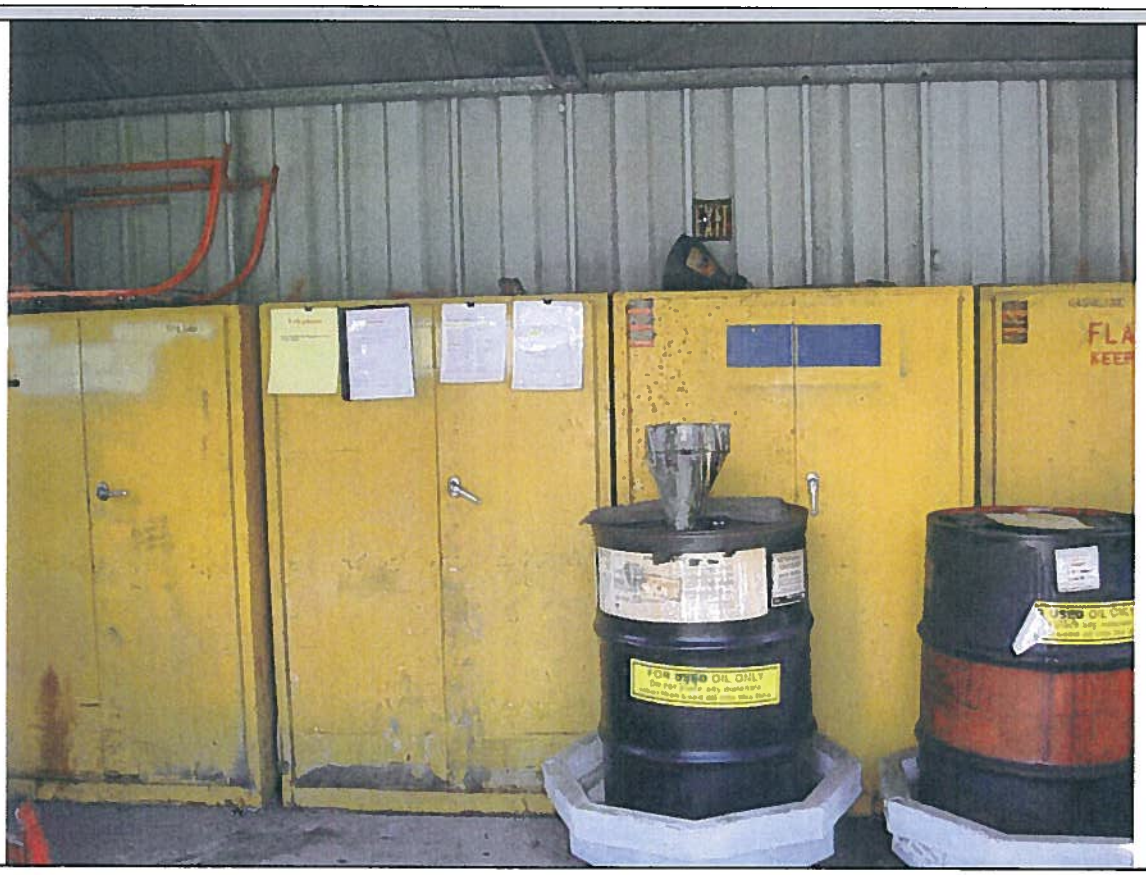
Comments: Hazardous Waste shed (SWMU 1)

MICHAEL BAKER JR., INC. – PHOTOGRAPHIC RECORD

SITE NAME: Harbison-Walker Refractories

PHOTOGRAPH **3**	
VIEW **Interior**	
PHOTOGRAPHS BY **Baker**	

Comments: Drummed used oil (foreground) within SWMU 1, drums reportedly empty on right side in SWMU 1

PHOTOGRAPH **4**	
VIEW **Interior**	
PHOTOGRAPHS BY **Baker**	

Comments: Cabinets for flammables in the back of SWMU 1

MICHAEL BAKER JR., INC. – PHOTOGRAPHIC RECORD

SITE NAME: Harbison-Walker Refractories

PHOTOGRAPH **5**	
VIEW **Interior**	
PHOTOGRAPHS BY **Baker**	

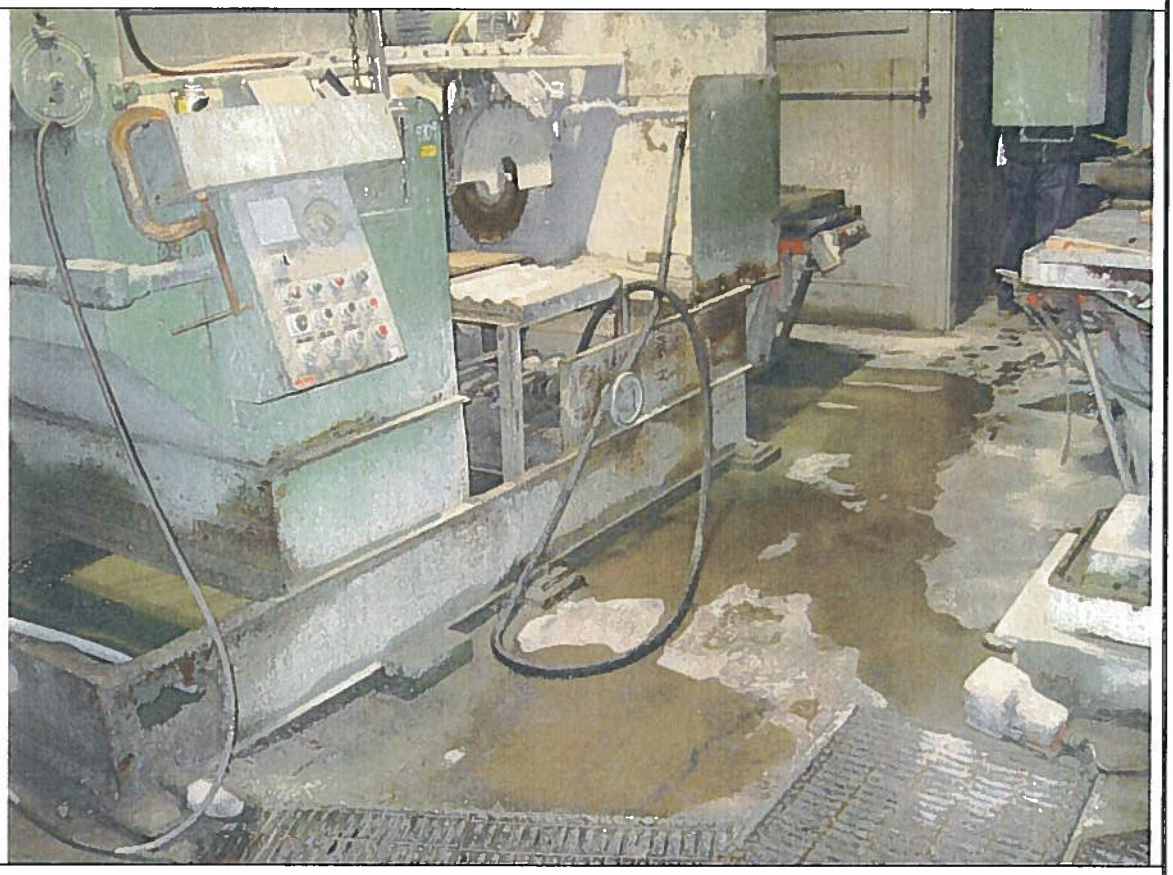
Comments: Non-hazardous waste containers (SWMU 2)

PHOTOGRAPH **6**	
VIEW **Interior**	
PHOTOGRAPHS BY **Baker**	

Comments: Floor drain inside the Pilot Plant capture wash water from machinery

MICHAEL BAKER JR., INC. – PHOTOGRAPHIC RECORD

SITE NAME: Harbison-Walker Refractories

PHOTOGRAPH **7**	
VIEW **Interior**	
PHOTOGRAPHS BY **Baker**	

Comments: Wet saw machinery in Saw Room

PHOTOGRAPH **8**	
VIEW **Interior**	
PHOTOGRAPHS BY **Baker**	

Comments: Subsurface drains capture cooling water spillage from wet saw machinery

Baker

Michael Baker Jr., Inc.

APPENDIX B

Figures

SOURCE:
GOOGLE.com

SCALE: Approx.1"=200'	DATE:MAY 2009	Baker MICHAEL BAKER JR., INC. MOON TOWNSHIP, PENNSYLVANIA
S.O. NO.: 114509	FILE: 114509-HARB-01	FIGURE 1 FACILITY LOCATION MAP
DSN/DWN:JPK/RRR	CHK: JPK	HARBISON -WALKER REFRACTORIES (an ANH COMPANY) WEST MIFFLIN, PENNSYLVANIA

SCALE: Approx.1"=100'	DATE:MAY 2009	Baker MICHAEL BAKER JR., INC. MOON TOWNSHIP, PENNSYLVANIA
S.O. NO.: 114509	FILE: 114509-HARB-02	FIGURE 2 FACILITY LAYOUT MAP
DSN/DWN:JPK/RRR	CHK: JPK	HARBISON -WALKER REFRACTORIES (an ANH COMPANY) WEST MIFFLIN, PENNSYLVANIA

Baker

Michael Baker Jr., Inc.

APPENDIX C

Inventory of Documentation and Reference Documents

The following is a list of documents in the order referenced in the report.

Document Date	Document
October 02, 1989	Preliminary Assessment
1980-1994	Hazardous Waste Notifications
November 19, 1982	PADEP Determination of Facility being SQG
March 16, 1989	Reply to USEPA regarding SWMUs and SQG
October 31, 1989	Notice of Violation
May 20, 2009	Regarding Hazardous Waste Storage Location
May 29, 2009	Hazardous Waste Storage Move
1982-2009	Hazardous Waste Inspection Reports
May 29, 2009	Update on Coke and Electrodes